



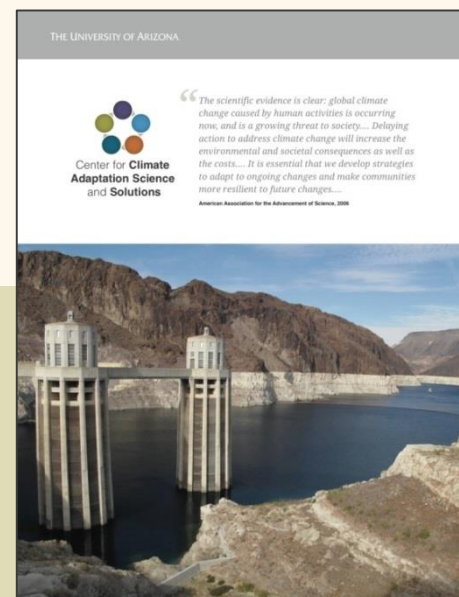
# Center for **Climate Adaptation Science and Solutions**

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Department of Soil, Water  
and Environmental Science



Sponsored by the Institute of the Environment

In partnership with the College of Agriculture and Life Sciences



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# CCASS Themes/Grand Challenges



- *Bridging the gap between science and decision making*
- *Managing risk in a complex, interdisciplinary and multi-sectoral context*
- *Supporting transformational adaptation and preparing for extreme climate and weather events*
- *Finding synergies among adaptation and mitigation strategies to promote sustainability*

# What CCASS is:

- An opportunity for convening efforts that currently are operating independently across campus
- A way to substantively support existing adaptation efforts and centers at UA and externally
- A way of building capacity to support stakeholders more effectively
- A way to build the visibility of the UA and partners' efforts in adaptation
- A way of coordinating and clarifying roles, particularly related to stakeholder engagement

# CCASS Core Leadership Team

Ardeth Barnhart, Mary Black, Dave Breshears, Jim Buizer, Karletta Chief, Mike Crimmins, Carrie Enquist, Dan Ferguson, Gregg Garfin, Kathy Jacobs, Diana Liverman, Chad Marchand, Alison Meadow, Jonathan Overpeck, and Chris Scott

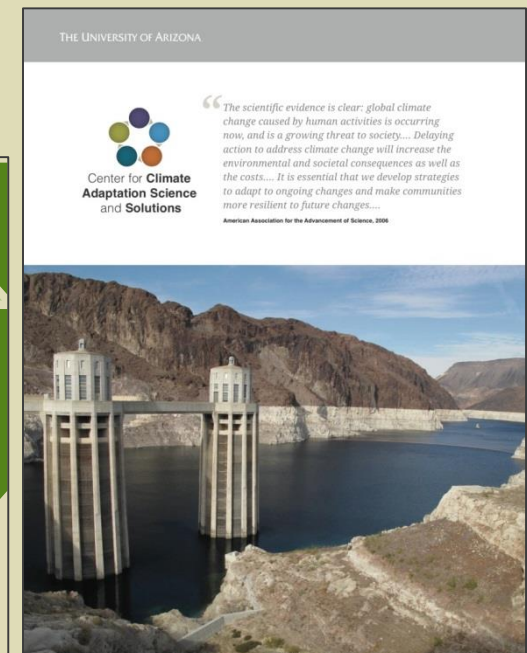
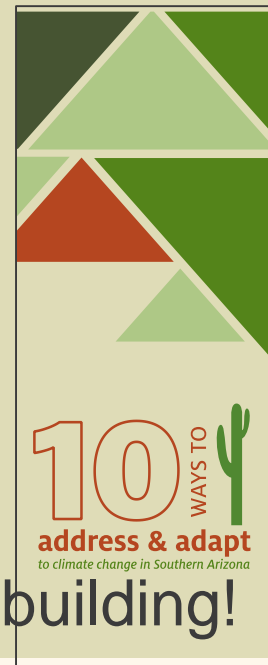




# Outputs and outcomes

- Support for programs/projects of CCASS Core and Associates
- Expertise directory linked to projects/people/languages/countries
- Workshops and publications
- Events, student engagement and visiting fellows
- Needs assessments
- Websites, publicity materials
- Tools, templates and adaptation plans/solutions

Plans! Information! Community building!



# National/international meetings

# Scenario planning workshop, March 31-April 1, 2015

Participants from AK, AZ, CA, CO, MA, MD, ME, NC, NM, NV,  
NY, OR, VA, Canada and France

## Scenario Planning for Climate Change Adaptation Decision Making: The State of the Art

## Workshop Report



**March 31-April 1, 2015**

University of Arizona, Tucson, Arizona

hosted by the Center for Climate Adaptation Science and Solutions

**Citation:** Garfin, G., M. Black, and E. Rowland (2015), Advancing scenario planning for climate decision making, *Eos*, 96, doi:10.1029/2015EO037933. Published on 27 October 2015.

# SCENARIO PLANNING for Climate Adaptation

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a project of the Center for Climate Adaptation Science and Solutions  
and the DOI Southwest Climate Science Center

[GUIDES](#)

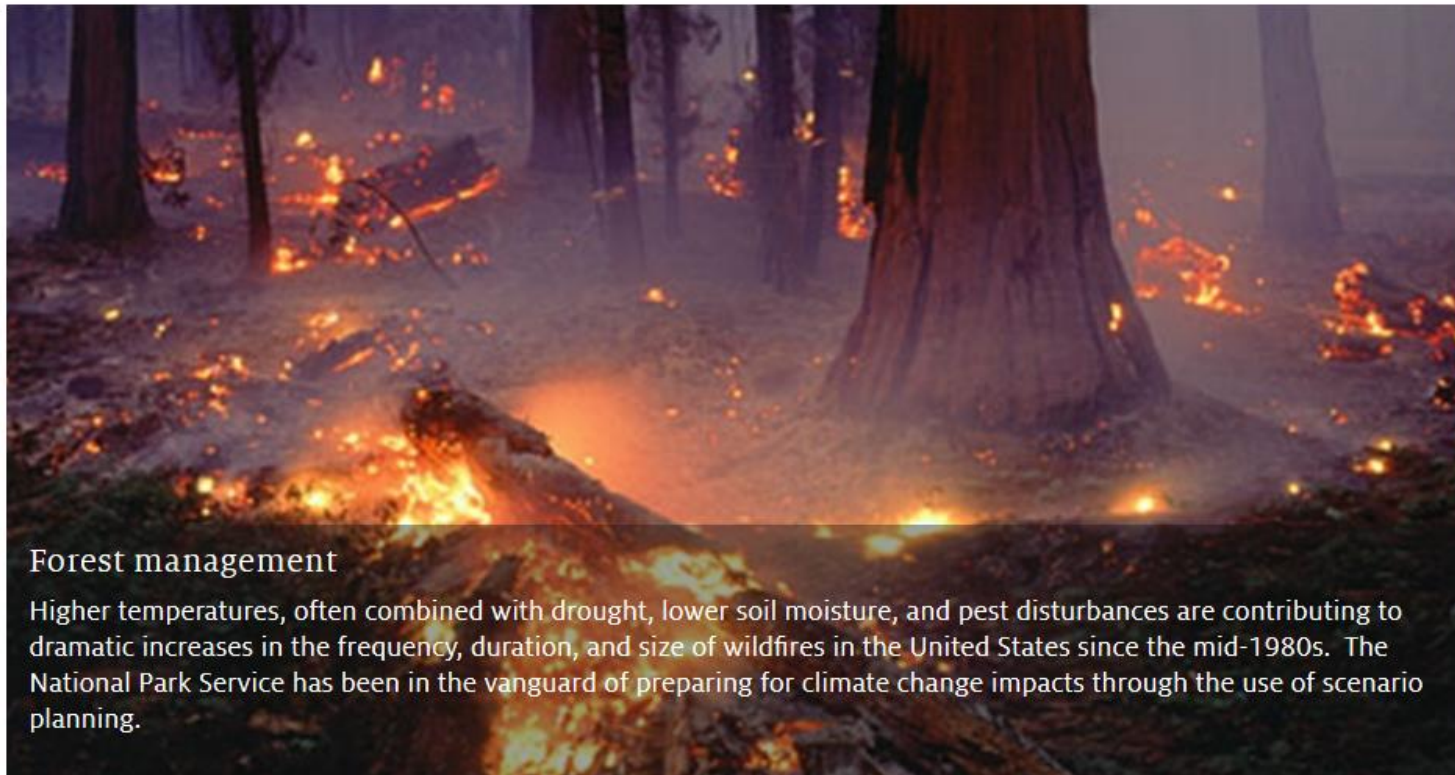
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## Forest management

Higher temperatures, often combined with drought, lower soil moisture, and pest disturbances are contributing to dramatic increases in the frequency, duration, and size of wildfires in the United States since the mid-1980s. The National Park Service has been in the vanguard of preparing for climate change impacts through the use of scenario planning.







## Native Nations Climate Adaptation Program

# *Supporting Native Americans and their nations as they meet climate challenges.*

### Objectives

- **Facilitate** efforts of UA climate/environment researchers, faculty, staff, and students working with Native Nations to build resiliency to climate impacts.
- **Assist** Native Nations in identifying and building capacity for adaptation and in identifying climate-related sources of risk and opportunity.
- **Engage** in outreach and extension programs with tribes in cooperation with Arizona Cooperative Extension.
- **Strengthen** collaborative networks and relationships among researchers, tribal members, and other potential partners throughout the Southwest.
- **Support** climate change adaptation and risk management projects taking place on tribal lands.
- **Build** educational opportunities, support networks and mentoring and career pipelines at the UA and in partnership with tribal colleges and organizations.



# SWCSC investments

\$100K leveraged by \$300,000 from Haury and \$150,000 TRIF:

- Building regional capacity with SW CSC and numerous LCCs and tribes through support for **networking efforts** (SW Tribal Climate Change Network, face-to-face meetings with LCCs)
- **Conducting assessments of tribal climate change activities and information needs** throughout the Southwest (in progress); 189 tribes contacted
- **Tribal Climate Adaptation Summit** in Nov. 2015 (mainly funded through DLCC); brought tribes together who had approved climate adaptation plans to share experiences, lessons, etc.
- Support for Karletta Chief's work with **Pyramid Lake Paiute Tribe on vulnerabilities and resilience** to climate change
- Support for **scenario planning** for climate change adaptation (publications, website)

# Tribal Leaders Adaptation Summit



Native Nations Climate  
Adaptation Program



Agnese Nelms Haury Program  
in Environment and Social Justice

## Native Nations Climate Adaptation Program Tribal Leaders Summit on Climate Change: A Focus on Climate Adaptation Planning and Implementation

### REPORT

*Held at  
University of Arizona  
Tucson, Arizona  
Nov. 12 - 13, 2015*



# CSC Investments

2016-2017 funding, additional funding will support new **assistant research scientist** to:

- Develop content and on-the-ground engagement with tribes (with Alison)
- Develop climate adaptation education modules (Karletta)

And it will:

- fund a **tribal adaptation capacity building workshop** in 2017 (develop framework for climate practitioners to facilitate tribal climate adaptation plan work)
- support more **scenario planning work** to integrate with the DLCC's Conservation Design

# Other NNCAP activities

- Tohono O'odham Nation climate adaptation plan (Alison Meadow, Staff Scientist; funding provided by TON). Phase 3 now underway
- Creating “Climate Profiles” Fact Sheets, funded largely by Haury, including climate histories and projected climate conditions for each of the Arizona tribes. Science support for development of adaptation plans; involves Crimmins, Meadow, Black, Chief, Weiss, and Ferguson. Four Fact sheets completed or in draft form



# Coming soon in 2017...

Hire Assistant Research Scientist

BIA Liaison to join group

IE/NNCAP/NNI Collaborations and proposals:

- Understanding tribal governance and rules of engagement;
- Water and Culture workshop
- Possible STEM pipeline proposal

Adaptation capacity building workshop

# Ingredients of a Climate Service

- Vision
  - Resources
  - Incentives
  - Relationships
  - Actionable Science = understanding what is at risk; what we know and what we don't; what questions to ask and answer; how to use what we know; how to characterize uncertainty.
- Regional Knowledge Networks, building from existing capacity, with better articulation and stronger linkages